

Amendments to the claims:

This listing of claims will replace all prior versions and listings of the claims in the application:

Listing of claims:

Claim 1 (currently amended): An apparatus for supercritical processing of a workpiece comprising:

- a. a transfer module having an entrance;
- b. a supercritical processing module coupled to the transfer module, the supercritical processing module having a workpiece cavity for holding the workpiece during high pressure processing, the supercritical processing module configured to withstand pressures above 1,500 psi;
- c. a non-supercritical processing module coupled to the transfer module;
- d. a transfer mechanism coupled to the transfer module, the transfer mechanism configured to move the workpiece between the entrance, the supercritical processing module, and the non-supercritical processing module; and
- e. a circulation line coupled to the workpiece cavity and configured to circulate a supercritical fluid along the circulation line and through the workpiece cavity in a supercritical state.

Claim 2 (original): The apparatus of claim 1 wherein the entrance of the transfer module comprises a hand-off station.

Claim 3 (original): The apparatus of claim 2 wherein the entrance of the transfer module further comprises an additional hand-off station.

Claim 4 (original): The apparatus of claim 1 wherein the transfer module operates in vacuum and further wherein the entrance of the transfer module comprises a loadlock.

Claim 5 (original): The apparatus of claim 4 wherein the entrance of the transfer module further comprises an additional loadlock.

Claim 6 (original): The apparatus of claim 1 wherein the non-supercritical processing module comprises a semiconductor processing module.

Claim 7 (original): The apparatus of claim 6 wherein the semiconductor processing module is selected from the group consisting of an etch module, a physical vapor deposition module, a chemical vapor deposition module, an electroplating module, a chemical mechanical planarization module, a photolithography module, and an other semiconductor processing module.

Claim 8 (original): The apparatus of claim 1 wherein the transfer mechanism comprises a robot.

Claim 9 (original): The apparatus of claim 8 wherein the transfer module comprises a circular configuration.

Claim 10 (original): The apparatus of claim 9 wherein the robot comprises a central robot, the central robot occupying a center of the circular configuration.

Claim 11 (original): The apparatus of claim 8 wherein the transfer module comprises a track configuration.

Claim 12 (original): The apparatus of claim 11 wherein the robot comprises a tracked robot, the tracked robot comprising the robot coupled to a track such that the robot moves along the track in order to reach the supercritical processing module and the non-supercritical processing module located along the track.

Claim 13 (original): The apparatus of claim 8 wherein the robot comprises an extendable arm and an end effector.

Claim 14 (original): The apparatus of claim 13 wherein the robot further comprises an additional arm and an additional end effector.

Claim 15 (original): The apparatus of claim 1 wherein the first supercritical processing module comprises a pressure vessel.

Claim 16 (previously presented): The apparatus of claim 15 wherein the pressure vessel comprises the workpiece cavity and a pressure vessel entrance, the pressure vessel entrance providing ingress and egress for the workpiece.

Claim 17 (original): The apparatus of claim 16 wherein the transfer mechanism is configured to place the workpiece in the workpiece cavity.

Claim 18 (original): The apparatus of claim 16 further comprising an ante-chamber coupling the transfer module and the supercritical processing module.

Claim 19 (original): The apparatus of claim 1 further comprising means for pressurizing the supercritical processing module.

Claim 20 (previously presented): The apparatus of claim 19 wherein the means for pressurizing comprises a pressurizing configuration which comprises a supply vessel coupled to a pump which is coupled to the supercritical processing module.

Claim 21 (original): The apparatus of claim 18 further comprising means for sealing, the means for sealing operable to seal the pressure vessel entrance.

Claim 22 (original): The apparatus of claim 1 wherein the transfer module further comprises means for producing a vacuum within the transfer module.

Claim 23 (previously presented): The apparatus of claim 1 wherein the transfer module further comprises means for maintaining a pressure in the transfer chamber configured to be a slight positive pressure relative to a surrounding environment.

Claim 24 (original): The apparatus of claim 23 wherein the means for maintaining the slight positive pressure in the transfer module comprise an inert gas injection arrangement.

Claim 25 (original): The apparatus of claim 1 further comprising means for controlling such that the means for controlling directs the transfer mechanism to move the workpiece.

Claims 26-28 (canceled).

Claim 29 (previously presented): An apparatus for supercritical processing a workpiece comprising:

- a. means for transferring the workpiece configured to transfer the workpiece into a transfer module;
- b. means for supercritical processing having a workpiece cavity and configured such that in operation the means for transferring transfers the workpiece to the means for supercritical processing and further such that in operation the means for supercritical processing processes the workpiece within the workpiece cavity;
- c. means for non-supercritical processing configured such that in operation the means for transferring transfers the workpiece to the means for non-supercritical processing and further such that in operation the means for non-supercritical processing processes the workpiece; and
- d. means for circulating a supercritical fluid along the means for circulating and through the workpiece cavity in a supercritical state.

Claim 30 (previously presented): An apparatus for supercritical processing of a workpiece comprising:

- a. a hand-off station;
- b. a supercritical processing module coupled to the hand-off station, the supercritical processing module having a workpiece cavity and configured to perform supercritical processing on the workpiece within the workpiece cavity;
- c. a non-supercritical processing module coupled to the hand-off station;
- d. a transfer mechanism coupled to the hand-off station, the transfer mechanism configured to move the workpiece between the entrance, the supercritical processing module, and the non-supercritical processing module; and
- e. a circulation line coupled to the supercritical processing module and configured to circulate a supercritical fluid along the circulation line and through the workpiece cavity in a supercritical state.

Claim 31 (previously presented): The apparatus of claim 20, wherein the supply vessel contains CO₂.

Claim 32 (canceled)

Claim 33 (previously presented): The apparatus of claim 1, wherein the circulation line comprises a pump.

Claim 34 (previously presented): An apparatus for supercritical processing of a workpiece comprising:

- a. a transfer module having an entrance;
- b. a supercritical processing module coupled to the transfer module, the supercritical processing module having a workpiece cavity for holding the workpiece during high pressure processing;
- c. a non-supercritical processing module coupled to the transfer module;
- d. a transfer mechanism coupled to the transfer module, the transfer mechanism configured to move the workpiece between the entrance, the supercritical processing module, and the non-supercritical processing module;
- e. a circulation line coupled to the workpiece cavity and configured to circulate a supercritical fluid along the circulation line and through the workpiece cavity in a supercritical state; and
- f. a chemical rinse and supply arrangement coupled to the circulation line.

Claim 35 (previously presented): The apparatus of claim 34, wherein the chemical rinse and supply arrangement comprises a chemical supply vessel coupled to a first pump, wherein the first pump is coupled to the circulation line.

Claim 36 (previously presented): The apparatus of claim 35, wherein the chemical rinse and supply arrangement further comprises a rinse agent supply vessel coupled to a second pump, wherein the second pump is coupled to the circulation line.

Claim 37 (previously presented): The apparatus of claim 36, wherein the rinse agent supply vessel contains a rinse agent selected from the group consisting of water, alcohol, acetone, and a mixture thereof.

Claim 38 (previously presented): The apparatus of claim 35, wherein the chemical supply vessel contains a solvent.

Claim 39 (new): An apparatus for supercritical processing of a workpiece comprising:

- a. a transfer module having an entrance;
- b. a supercritical processing module coupled to the transfer module, the supercritical processing module having a workpiece cavity containing a fixed substrate holder for holding the workpiece during high pressure processing;
- c. a non-supercritical processing module coupled to the transfer module; and
- d. a transfer mechanism coupled to the transfer module, the transfer mechanism configured to move the workpiece between the entrance, the supercritical processing module, and the non-supercritical processing module.

Claim 40 (new): The apparatus of claim 1, wherein the workpiece cavity is sized to accommodate a wafer larger than 8 inches.